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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,467	02/14/2007	Alessandro Facchin	78857.105669	1533
86528	7590	01/26/2010		
King & Spalding LLP 401 Congress Avenue Suite 3200 Austin, TX 78701			EXAMINER KIM, CHRISTOPHER S	
			ART UNIT 3752	PAPER NUMBER
			MAIL DATE 01/26/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/597,467	<b>Applicant(s)</b> FACCHIN, ALESSANDRO	
	<b>Examiner</b> Christopher S. Kim	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The response filed November 3, 2009 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

3. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the ends" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the ends" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the ends" in line 7. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

4. Claims 1-8, 10-18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Palma (4,423,842).

Reading of claims 1-8, 10-18 and 20 where the cavity is empty.

Palma discloses a valve body comprising:

- a needle 8;

- a cartridge 32;

- a recess 45;

- a seat plate 46 comprising:

  - a needle seat 55;

- the needle 8 further comprising:

  - a seat-part 73 comprising:

    - a sealing area 74;

    - a cavity 91;

wherein the cavity 91 is empty (the empty portion of cavity 91 that is not filled by post 90).

Reading of claim 20 where the cavity is filled.

Palma discloses a valve body comprising:

- a needle 8;

- a cartridge 32;

- a recess 45;

- a seat plate 46 comprising:

  - a needle seat 55;

- the needle 8 further comprising:

  - a seat-part 73 comprising:

    - a sealing area 74;

a cavity 91;  
a filler part 90;  
a sack volume 56.

The functional recitation "...makes the seat-part flexible in the sealing area..." requires the ability to flex. Substantially all materials are capable of some degree of flexure. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP 2114.

***Claim Rejections - 35 USC § 103***

5. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palma (4,423,842).

Reading of claims 1-4, 6-8, 10-14 and 16-18 where the cavity is filled.

Palma discloses a valve body comprising:

a needle 8;  
a cartridge 32;  
a recess 45;  
a seat plate 46 comprising:  
a needle seat 55;  
the needle 8 further comprising:  
a seat-part 73 comprising:  
a sealing area 74;

a cavity 91;

a filler part 90;

a sack volume 56.

Palma discloses the limitations of the claimed invention with the exception of the cavity being filled with a material of stiffness less than a stiffness of the seat part.

Materials of different stiffness are well known in the art. For example, it is well known that steel is stiffer/harder than brass. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the filler part 90 of Palma of material that is less stiff than the seat part 73 to prevent wear of the seat part 73.

Regarding claims 5 and 15, Palma discloses the limitations of the claimed invention with the exception of the filler part consisting of plastics. Plastics are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the filler part of Palma from plastics to reduce corrosion.

Regarding claims 9 and 19, Palma discloses the limitations of the claimed invention with the exception of the needle being inserted into the ball to define the cavity. Doing so is merely making the Palma's needle and ball as separate elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided a separate needle and ball in the device of Palma, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert et al. (6,338,445) in view of Stier (6,631,854).

Lambert discloses a valve body comprising:

- a needle 12;
- a cartridge 10;
- a needle seat 13a;
- the needle further comprising:
  - a seat-part comprising:
    - a sealing area 12b;
    - a cavity 17a, 27;
  - a filler part 18a;
  - a sack volume 37;
  - an actuator unit (fuel pump).

Lambert discloses the seat-part being flexible in figures 6 and 7 and in column 9, lines 55-60.

Lambert differs from what is being claimed in the cartridge comprising a seat plate. Lambert's seat plate is integral with the cartridge.

Stier discloses a fuel injector valve having a cartridge 2 having a seat plate 6.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the cartridge of Lambert into two parts to include a seat plate as taught by Stier to ease manufacturing.

***Response to Arguments***

7. Applicant's arguments filed November 3, 2009 have been fully considered but they are not persuasive.

Applicant argues that Palma provides no teaching that the guide post 90 is made from material less stiff than valve 73'. Claims 1, 10, 11 recite the alternative where the cavity is empty. Where the cavity is empty, the material in the cavity becomes a non-positively recited limitation. The dependent claims that further define the material in the cavity also are non-positively recited limitations. The cavity 91 is empty in portions where it is not occupied by post 90. Where claims 1, 10, 11 recite the alternative where the cavity is filled, the claims are now rejected under 35 U.S.C. 103(a). Regarding claim 20, applicant's argument is not commensurate in scope with the claimed invention because claim 20 fails to recite that the cavity is filled with a material of a stiffness less than a stiffness of the seat part.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation is found in the knowledge generally available to one of ordinary skill in the art. Whether to



make the cartridge and the seat plate integral or of two pieces for the ease of manufacturing is knowledge known to one of ordinary skill in the art.

Applicant argues that Lambert-Stier combination fails to teach all of the limitations, i.e., ends of the seat part around the cavity flex inwardly. Applicant's argument is not commensurate in scope with claim 20.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571)

272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher S. Kim/  
Primary Examiner, Art Unit 3752

CK